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## Letter to the Editor

COVID-19 vaccines and herpes infection<sup>☆</sup>*Vacunas COVID-19 e infección por herpes*

To the Editor:

There are currently four vaccines marketed in Spain: Comirnaty (BioNTech/Pfizer), COVID-19 Vaccine Moderna, Vaxzevria (AstraZeneca), and COVID-19 Vaccine Janssen. Pfizer and Moderna vaccines use mRNA technology, while AstraZeneca and Janssen are adenovirus vector vaccines.

To date, numerous adverse reactions have been described, the vast majority of which are mild (fever, headache, myalgia, pain at the injection site, etc.) and self-limiting in time. Immune thrombocytopenia is the most serious adverse effect of those described, with a very low incidence, although the consequences can be fatal. This adverse reaction has been responsible for suspending vaccination campaigns. The possible mechanism of this thrombocytopenia is unclear, although a possible autoimmune mechanism has been postulated against platelet factor 4, similar to that of heparin-induced thrombocytopenia.<sup>1,2</sup>

Reviewing the pharmacovigilance reports of the Spanish Agency for Medicines and Medical Devices (AEMPS), until April no case of herpes disease has been reported following vaccination with any of these three vaccines (Pfizer, Moderna and AstraZeneca).<sup>3</sup> Of the cases described in this letter, four have been notified to <https://www.notificaram.es> and three by the traditional yellow card method (the rest are pending notification).

This letter describes 29 cases of herpes virus infection in patients recently vaccinated with the Comirnaty vaccine and COVID-19 Vaccine Moderna in the Integrated Care Management (ICM) of Albacete. This data represents an incidence of 0.836 cases per 1,000 vaccinated people. 55% of the cases have been seen in women and the mean age of the patients has been 66 years (34–95 years). In 15 patients, symptoms developed after the first dose of vaccine (8.7 days on average) and in 14 patients they developed after the second dose (24.7 days on average after the second dose). The site of the lesions is as follows: 13 patients presented with herpes zoster in the thoracic region, eight in the abdominal area, three herpes zoster in the first trigeminal branch with ocular involvement, two herpetic keratitis and one case each in the buttock, leg in dermatome S1 and pelvis dermatome L1.

In one of the cases of herpetic keratitis, after treatment with valacyclovir, and after significant improvement, there was a considerable worsening after the administration of the second dose of the vaccine. This patient was being treated with an interleukin 17A inhibitor, secukinumab.

At the time of the study, 34,672 people had been vaccinated in this ICM, of whom 93.1% of patients who developed herpes were vaccinated with the Comirnaty vaccine and 6.1% with the COVID-19 Vaccine Moderna. This result is consistent with the vaccination data, since 85.6% of the population in this health area has been vaccinated with Comirnaty, 3.1% with Moderna, and 11.3% with AstraZeneca. In view of these results, it does not appear that the development of herpes infection is specifically related to one of the vaccines used, although it is noteworthy that no patients vaccinated with AstraZeneca have been found.

Our data agree with a recently published case series in Israel,<sup>4</sup> with six patients who developed herpes after vaccination with Comirnaty, although their study is conducted only among rheumatic patients.

It is well known that immunosuppressed situations can favour herpes reactivation, although this mechanism does not seem to be triggered by the COVID-19 vaccine.<sup>5</sup> Reactivation could be related to the inflammatory process that develops after vaccination.

There are few patients, and this fact will have to be confirmed with larger case series, but this letter is intended to be a wake-up call so that all health professionals remain attentive to any adverse reaction that may occur (even if it is only a suspicion) and that shows a causal and temporal relationship with the administration of the vaccine. These preliminary results will be complemented by a follow-up until the end of the vaccination campaign, especially with regard to whether the Vaxzevria vaccine is involved in the occurrence of this adverse event.

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## Conflict of interests

The authors declare no conflict of interest.

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